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Review Article

A LITERATURE REVIEW OF *MAATHULAI OADDU CHOORNA* FOR *KALICHAL* IN SIDDHA MEDICINE

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ABSTRACT

Four systems of traditional medicine have been adopted in Sri Lanka; Ayurveda, Siddha, Unani and *Deshiya Chikitsa*. The Siddha system of medicine is a traditional medical system that uses a scientific and holistic approach to provide preventive, promotive, curative, rejuvenating and rehabilitative healthcare. *'Maathulai oaddu Choorna'* (MC) is of the internal medicine which is the poly herbal formulation. *Maathulai oaddu Choorna* is one of the most important drugs in Siddha Ayurvedha Government hospitals in Sri Lanka. Therefore, we selected this drug to literature review related its ingredients for *'Kalichal'*. Data for this review on 14 ingredients from 8 families were collected from relevant books, peer review journals and websites from October to December 2024. The characteristics of the ingredients that were identified for the review were plant morphology, parts used, Principal properties of each ingredient such as taste, potency and biotransformation, pharmacological actions, phytochemicals and medicinal uses. Among these ingredients, all were identified as herbal materials and 2 (14%) of species were found in Poaceae, Zingiberaceae, Lauraceae and Umbelliferae families. Based on the plant morphology 5 (35%) and 4 (28%) plants were herbs and trees respectively. 5 (35%) species were used as dry fruits. Among these ingredients 10 (71.4%) were pungent in taste, 8 (57.14%) were hot potency and 11 (78.5%) were pungent *Vipaka*. Pharmacological actions such as stomachic 10 (71.42%), carminative 9 (64.28%) and stimulant 8 (57.14%). Phytochemicals such as tannin 9 (64.28%) and volatile oil 8 (57.14%) were highly found in these ingredients. This literature review provides useful documentary evidences related its ingredients for *Kalichal*. There is need further extensive scientific studies should be carried out to justify in future.

INTRODUCTION

In Siddha medicine the individual is microcosm of the universe. The human body consists of the five primordial elements and 7 physical constituents. *Vatham*, *Pitham*, *Kapham* are three humors which are life constituents of the human body. Disturbance and imbalance of humors lead to disease. There are 32 types of internal and 32 external medicines in siddha medicine. *'Maathulai oaddu Choorna'* (MC) is a poly herbal formulation used to treat *Kalichal, Porumal* and *Vayitrotam*. We selected this drug to Literature review related its ingredients for *'Kalichal'*.

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This review describes the phytochemicals, pharmacological action and medicinal uses of the part of each ingredient used in this formulation. The results of this review revealed that the pharmacological actions and medicinal uses of the drug were perfectly matched with each ingredient of the formulation.

AIM AND OBJECTIVE

Our aim is to justify the pharmacological actions and medicinal uses of the drug were perfectly matched with each ingredient of the formulation.

METHOTOLOGY

Study design: A literature review of *Maathulai oaddu Choorna'* for *'Kalichal'* in Siddha medicine.

Data collection: Data for the literature review were collected from relevant books, peer review journals and websites with the help of data entry form.

Duration of the study: From October to December 2024.

Statistical analysis: Collected data were processed and statistically analysed by simple statistical method using Microsoft Excel 2010.

RESULTS AND DISCUSSION

Taxonomic Position of the Medicinal Plants

Fourteen plants species belonging to eight families which had been documented as remedies for *Kalichal* were used for review. The taxonomic position of the individual plants is summarized in table 1. Plant taxonomy is the science that finds identifies, classifies, describes and names of the plants.

Family Distribution of the Medicinal Plants

The plant family is simply a collection of plants that share characteristics grouped together. Plants can be categorized by similar features such as overall appearance, seed groupings, flower, shapes and to show their relationship to one another. Families of the selected medicinal plants are shown in table 1.

Table 1: Taxonomic position of the medicinal plants and Family distribution of the Medicinal plants

Botanical/ Scientific/ Chemical names	Vernacular names				Family names/ types of minerals
	Tamil name	English name	Sinhala name	Sanskrit name	
Bambusa arundinaceae	*Mungil*	Bamboo	*Katu una*	*Amupah*	Poaceae
Elettaria cardamomum	*Aelam*	Malabar cardamomum	*Ensal*	*Bahula*	Zingiberaceae
Cinnamomum zeylanicum	*Illavangam*	Cinnamon bark	*Kurundu*	*Balya*	Lauraceae
Cinnamomum tamala	*Illavangapathiri*	Cinnamon leaf	*Kurundu*	*Balya*	Lauraceae
Mesua ferrea	*Sirunagampoo*	Ceylon iron wood	*Diyana*	*Naga*	Guttiferae
Trachyspermum ammi	*Omam*	Thymol seeds	*Asamodagam*	*Ajwain*	Apiaceae
Coriander sativum	*Kothamalli*	Coriander	*Kottamalli*	*Ababika*	Umbelliferae
Piper longum	*Thipili moolam*	Long pepper (Root)	*Tipilli*	*Chapala*	Piperaceae
Piper longum	*Thipili*	Long pepper	*Tipilli*	*Chapala*	Piperaceae
Cuminum cyminum	*Seeragam*	Cumin	*Sudu-duru*	*Ajaji*	Umbelliferae
Zingiber officinalis	*Sukku*	Dry ginger	*Inguru*	*Anupama*	Zingiberaceae
Piper nigrum	*Milagu*	Black pepper	*Gammiris*	*Dharmavarttana*	Piperaceae
Punica granatum	*Maathukai oaddu*	Pomegranate dried fruit shell	*Dleun*	*Dadima*	Punicaceae
Saccharum officinarum	*Seeni*	Sugar cane	*Uk*	*Ikshu*	Poaceae

Parts of the Medicinal Plants used for *Maathulai oaddu choorna*

Medicinal properties derived from plants may come from many different parts of a plant including leaves, roots, barks, seeds, fruits and flowers. The different parts of these plants contain different active ingredients and organoleptic characters.

The review revealed that parts used for *Maathulai oaddu choorna* were dry fruits 29%, seeds 15% and, rhizome, resin, root, granules, dried fruit shell, flower, leaf and bark were 7% each other.

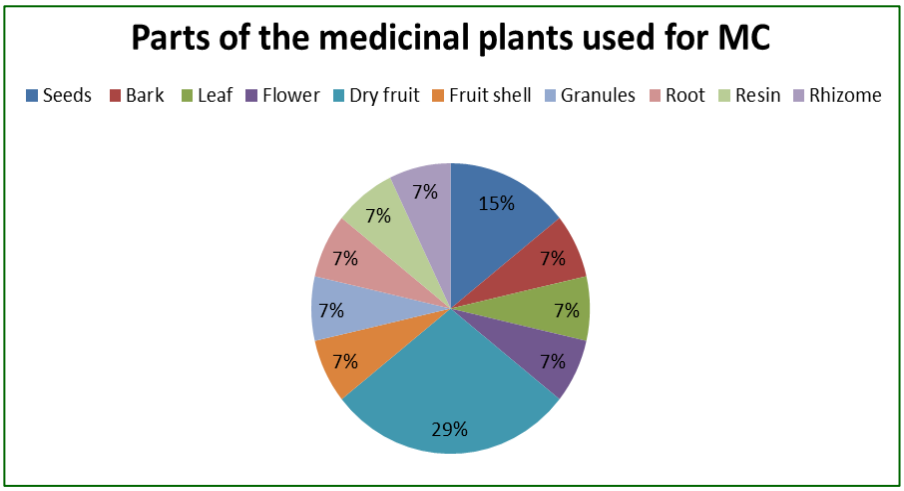


Figure 1

Plant Morphology of medicinal plants used for *Maathulai oaddu choorna*

Plant morphology is the study of the physical form and external structure of the plants. It is the study of the internal structure of plants. Plant morphology is the useful in the visual identification of plants. Based on the plant morphology of the medicinal plants 36% plants were classified to be herbs, 29% trees, 21% climbers and 7% shrub and grass each other.

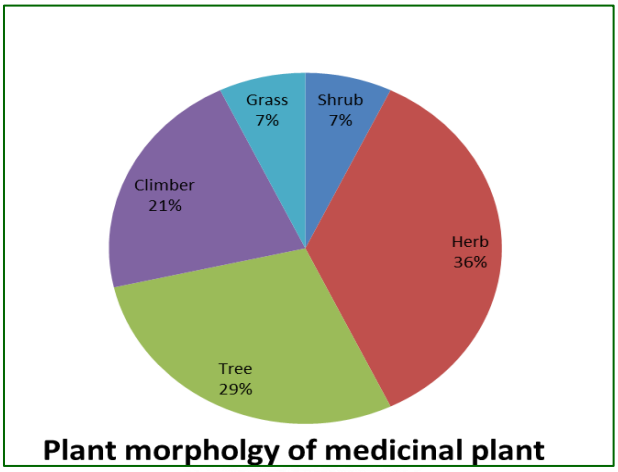


Figure 2

Principle properties of medicinal plants of this *Maathulai oaddu choorna*

The drugs used by Siddha medicine are classified on the basis of five principle properties; taste, character, potency, biotransformation and action. Taste has got a significant place in Siddha medicine. Tongue experiences these tastes when a drug is administrated orally, six tastes are sweet, salty, pungent, bitter, sour and astringent.

Potency is described as an active constituent of the drug which is responsible for the pharmacological activity of the medicinal herbs and other drugs. The drug has cold and hot potency. It is said to be the post absorptive taste which is an important aspect. Table 2 shows its organoleptic characters of this medicinal plants of this drug.

Table 2: Ingredients with parts used and its organoleptic characters of this drug

S.No	Botanical names	Parts used	Taste	Potency (Hot/cool)	Biotransformation (*Vipakam*)
1	*Bambusa arundinaceae*	Resin	Pungent	Hot	Pungent
2	*Elettaria cardamomum*	Seed	Pungent	Hot	Pungent
3	*Cinnamomum zeylanicum*	Bark	Pungent, sweet	Hot	Sweet
4	*Cinnamomum tamala*	Leaaf	Pungent	Hot	Pungent
5	*Mesua ferrea*	Flower	Bitter, astringent	Cool	Pungent
6	*Trachyspermum ammi*	Dry fruit	Pungent	Hot	Pungent
7	*Coriander sativum*	Seed	Pungent	Hot and cool	Pungent

8	*Piper longum*	Root	Pungent	Hot	Pungent
9	*Piper longum*	Dry fruit	Pungent	Hot	Pungent
10	*Cuminum cyminum*	Dry fruit	Pungent, sweet	Cool	Sweet
11	*Zingiber officinalis*	Rhizome	Pungent	Hot	Pungent
12	*Piper nigrum*	Dry fruit	Pungent, bitter	Hot	Pungent
13	*Punica granatum*	Dried fruit shell	Astringent	Cool	Pungent
14	*Saccharum officinarum*	Granules	Sweet	Cool	Sweet

Pharmacological actions of the medicinal plants of this drug

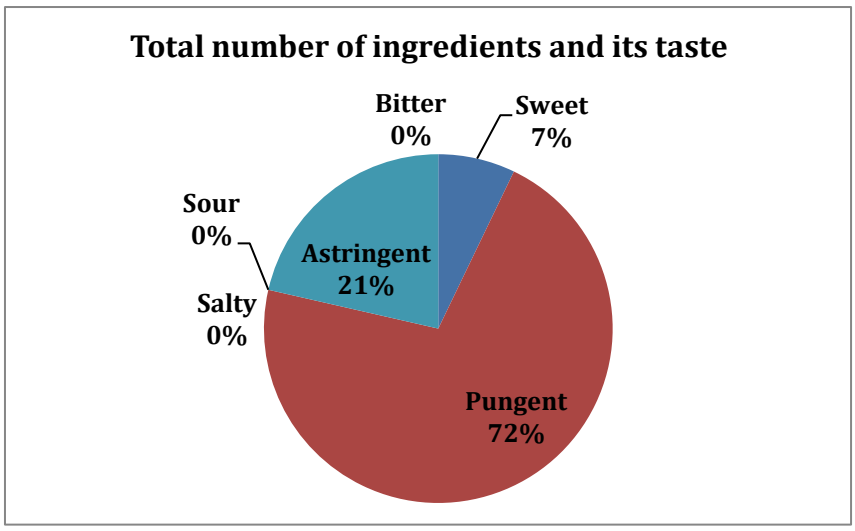
Action is the function of the drug. A drug has more than one action. The pharmacological actions of the medicinal plants which were utilized for the *Maathulai oaddu choorna* are listed in Table 3.

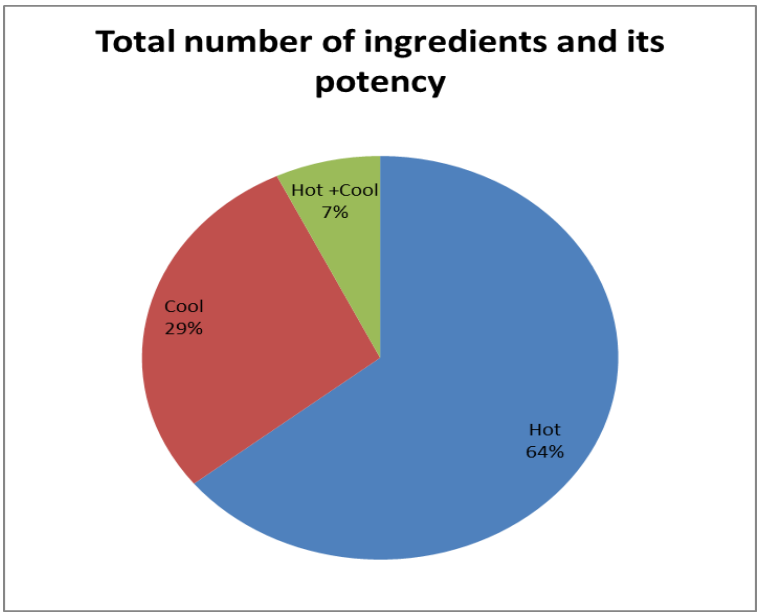
Phytochemicals contents of this drug

Phytochemicals are non-nutritive chemicals that have disease preventive properties which are active principle for function of the drug. Table 3 shows pharmacological actions and phytochemicals of ingredients of this drug.

Table 3: Pharmacological actions and phytochemicals of ingredients of this drug

S.No.	Botanical name/ Chemical name	Pharmacological actions	Phytochemicals	Medicinal uses
1	*Bambusa arundinaceae*	Antimicrobial, astringent, anti-inflammatory, antacid	Resin, tannin	Cough, asthma, indigestion
2	*Elettaria cardamomum*	Carminative, stimulant, stomachic	Volatile oil, fixed oil, barncol, cineole	Sore throat, cough, indigestion, diarrhea
3	*Cinnamomum zeylanicum*	Carminative, stimulant,	Piperine, volatile oil, tamn, fatty oil, and gum	Cough, asthma, indigestion
4	*Cinnamomum tamala*	Carminative, stimulant, stomachic, diaphoretic	Piperine, volatile oil, tamn, fatty oil, gum, starch and resin	Cough, asthma, indigestion, vomiting, diarrhea, fever
5	*Mesua ferrea*	Astringent, carminative	Essential oil, mesuol	Leucorrhoea, cough, diarrhoea
6	*Trachyspermum ammi*	Anti-oxidant, antimicrobial, stomachic, carminative	Tannin, saponin	Indigestion, diarrhoea cough, fever
7	*Coriander sativum*	Carminative, stomachic, stimulant, diuretic, tonic	Coriandrol, volatile oil, tannin	Fever, indigestion, diarrhoea, vomiting
8	*Piper longum*	Stomachic, expectorant	Pipeine, piperidine, volatile oil, tannin	Cough, diarrhoea, sore throat, fever
9	*Piper longum*	Carminative, stimulant	Pipeine, piperidine, volatile oil, tannin	Cough, asthma, indigestion
10	*Cuminum cyminum*	Carminative, stomachic, stimulant, astringent	Cumin, cuminol, fatty oil, tannin, resin	Asthma, diarrhoea, cough, fever
11	*Zingiber officinalis*	Carminative, stomachic, stimulant	Gingerol, volatile oil, tannin	Sore throat, fever, cough, indigestion, diarrhoea
12	*Piper nigrum*	Carminative, antidote, stimulant	Pipeine, piperidine, volatile oil, tannin	Indigestion, anaemia, ulcer, cough, fever, diarrhoea, sore throat
13	*Punica granatum*	Stomachic, astringent	Tannin, gallic acid, punicalins	Vomiting, diarrhoea, hiccup, fever
14	*Saccharum officinarum*	Demulcent, cooling	Fatty acid, flavanoids	Vomiting, diarrhoea, hiccup





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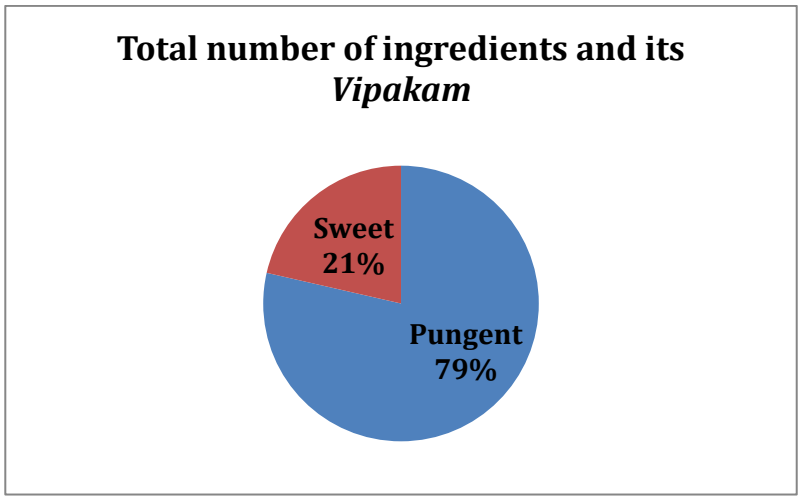

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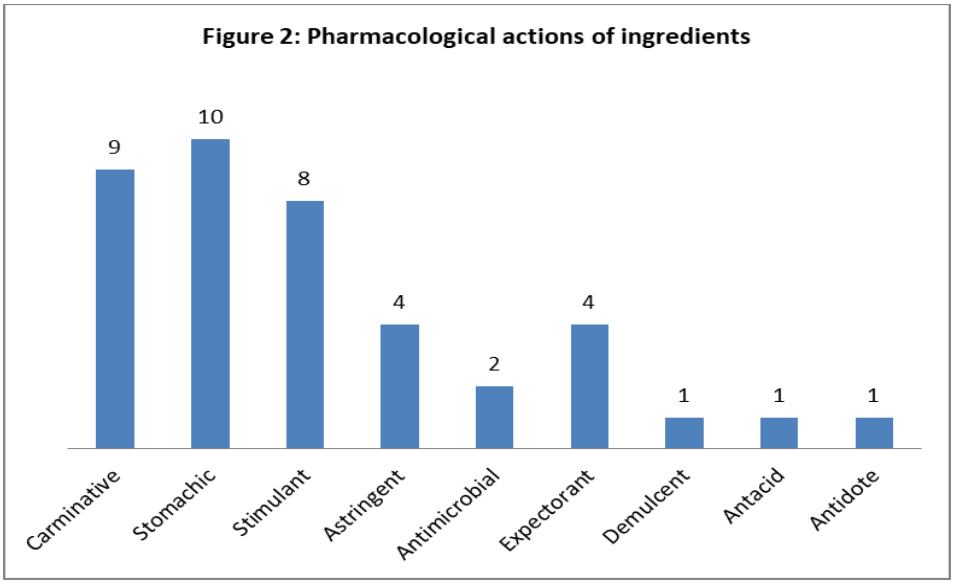

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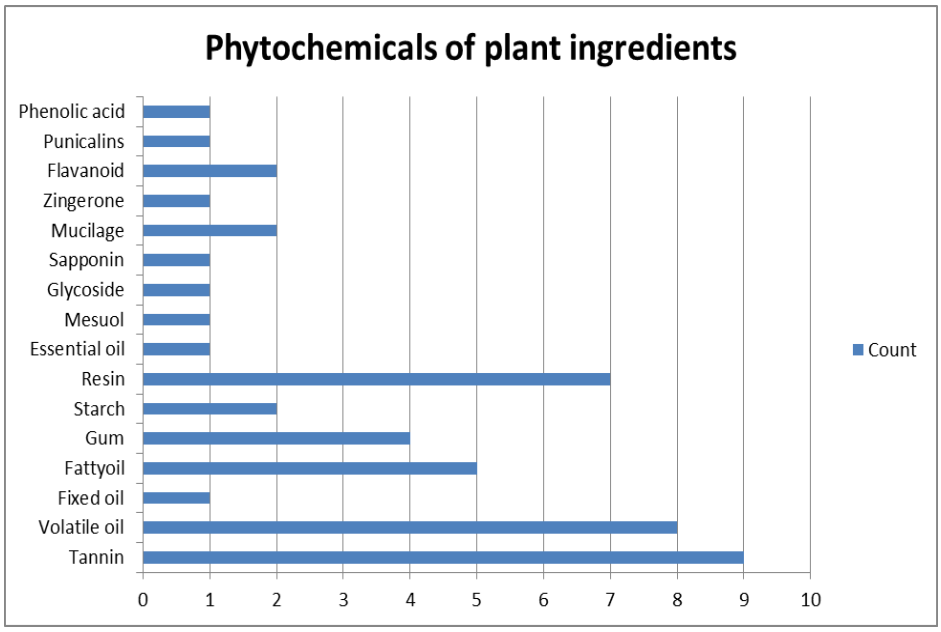

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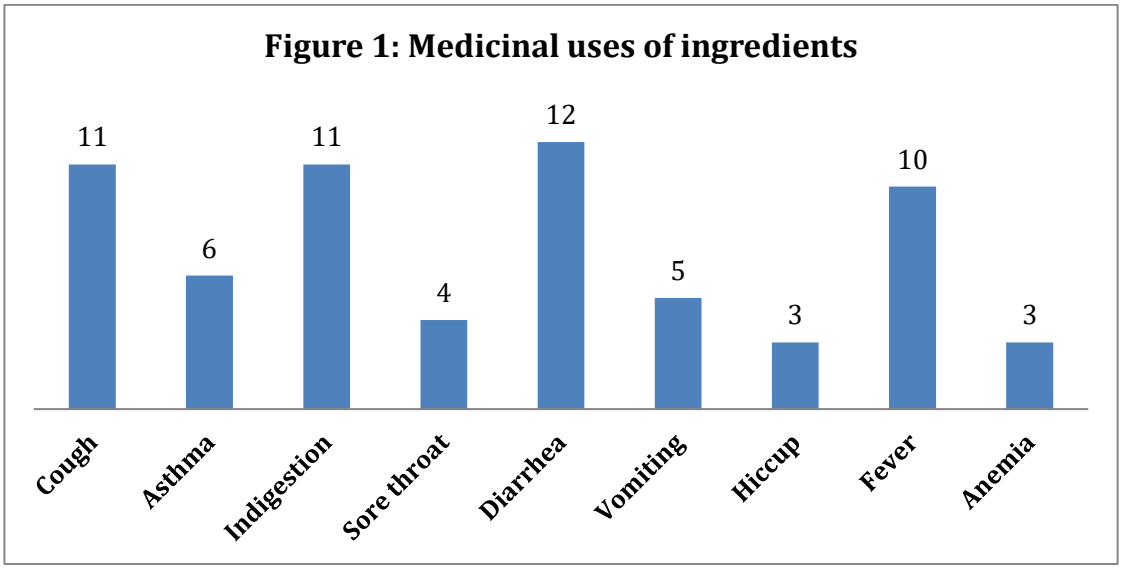

Figure-08

CONCLUSION

'Maathulaioaddu Choorna' (MC) is a poly herbal formulation used to treat *Kalichal.* We selected this drug to literature review related its ingredients for *'Kalichal'*. This literature review provides useful documentary evidences related its ingredients for *Kalichal*. However, there is a need for further reviews related to the chemical composition, elemental analysis, qualitative and quantitative analysis of phytochemicals, physiochemical properties and toxic substances. Further extensive scientific studies also should be carried out to justify in future.

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